

1774

second embodiment, all of the elements are formed substantially the same way except that the plate 2' is made thinner in Fig. 2 than the plate 2 in Fig. 1, the plate 4' is made thicker than the plate 4 in Fig. 1 and the indicia 8' are formed in inverse. By varying the relative thickness of the plates, it is possible to change the strength of the overall luminous plate to suit the particular application.

5 Also by printing the indicia in reverse such as the indicia 8' in Fig. 2, the luminous light energy in the visible spectrum will be visible from the luminous panel as letters which in some situations or circumstances may be more visible than the construction shown in Fig. 1.

Referring to Fig. 3, shown therein is a third embodiment of the present invention. In this third embodiment, the bottom plate 2 is eliminated. In its place, a protective layer 12 is provided.

10 This protective layer may comprise aluminum or tin foil or a suitable plastic film and protects the bottom surface of the interlayer 6. Otherwise, the embodiment of Fig. 3 functions in the same way the embodiments of Figs. 1 and 2. However, this embodiment only emits light from one side.

Referring to Fig. 4, shown therein is a fourth embodiment of the present invention. In this embodiment, the top surface 14 of the top plate 4 and/or bottom surface 16 of the bottom plate 2 may be half silvered in order to allow light to enter the non-powered luminescent plate but be reflected or trapped between the top and bottom plates 2 and 4 by the partial or half silvered layers 14 and 16. In this way, the light capturing ability of the non-powered luminous plate may be enhanced.

Still further, in other applications, the top or bottom surface of the plate 2 which is contact with the interlayer 6 could be provided with a completely mirrored surface. By providing the completely mirrored surface, all of the light which would be emitted by the interlayer 6 would be reflected by the mirror and only come out of the top surface 14 of the upper plate 4. Still further and in other embodiments, the interlayer 6 further comprises reflective particles to further enhance the emission of light and to provide a more aesthetic appearance.

25 Finally, by the utilization of the photostorage and emissive material of U.S. serial No. 09/166,199, <sup>now U.S. Patent No. 6,177,029,</sup> it is possible to provide an interlayer 6 which is of different colors. In other words, the interlayer 6 can be any colors such as red, green, blue, purple, etc. By utilizing the photostorage and emissive material of U.S. application serial No. 09/166,199, <sup>now U.S. Patent No. 6,177,029,</sup> the color of the luminous panel and the color of the light emitted from the non-powered luminous panel can be selected based upon

30 esthetics or the use. Particularly, for emergency signs or uses, it may be desirable to provide the interlayer 6 in red. Finally, in some applications, it may be useful to utilize a colored light

208  
7/20/04

208  
7/20/04